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Girard, et al.

CLAIMS

1 1. A tray for holding components, said tray comprising first and second sides,
2 wherein:

3 said first side includes at least one first component receptacle for engaging
4 said component; and

5 said second side includes at least one component engaging member;
6 wherein said first component receptacle and said component engaging member are
7 aligned such that when multiples of said tray are stacked upon each other said first
8 component receptacle and said component engaging member will cooperate to
9 restrain the motion of the component relative to said tray.

1 2. The tray of claim 1 wherein the component has first and second engagement
2 surfaces and said first component receptacle engages said the component engagement
3 surface and wherein said component engaging member is a second component
4 receptacle for engaging the second component engagement surface.

1 3. The tray of claim 1 wherein said component engaging member is a
2 protuberance extending outwardly from said second side.

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1 4. The tray of claim 1 wherein the component is a suspension used in a hard disk
2 drive.

1 5. The tray of claim 4 wherein the suspension has first and second engagement
2 surfaces and said first component receptacle engages said the first suspension
3 engagement surface and wherein said component engaging member is a second
4 component receptacle for engaging the second suspension engagement surface.

1 6. The tray of claim 4 wherein the suspension includes a base plate and a load
2 beam and wherein said first component receptacle includes a base plate seat and a
3 load beam seat.

1 7. The tray of claim 6 wherein said load beam seat includes a vacuum through
2 hole.

1 8. A processing assembly comprising a base including at least one vacuum
2 chamber and a tray, said tray being in fluid communication with said vacuum
3 chamber and wherein said tray is useful for holding components during a process
4 performed on the components, said tray comprising first and second sides, wherein:

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5 said first side includes at least one first component receptacle for engaging
6 said component; and
7 said second side includes at least one component engaging member;
8 wherein said first component receptacle and said component engaging member are
9 aligned such that when multiples of said tray are stacked upon each other said
10 component engaging member and said receptacle will cooperate to restrain the
11 motion of the component relative to said tray.

1 9. The processing assembly of claim 1 wherein the component has first and
2 second engagement surfaces and said first component receptacle engages said the
3 component engagement surface and wherein said component engaging member is a
4 second component receptacle for engaging the second component engagement
5 surface.

1 10. The processing assembly of claim 9 wherein said component engaging
2 member is a protuberance extending outwardly from said second side.

1 11. The processing assembly of claim 9 wherein the component is a suspension
2 used in a hard disk drive.

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3 12. The processing assembly of claim 11 wherein the suspension has first and
4 second engagement surfaces and said first component receptacle engages said the
5 first suspension engagement surface and wherein said component engaging member
6 is a second component receptacle for engaging the second suspension engagement
7 surface.

1 13. The processing assembly of claim 11 wherein the suspension includes a base
2 plate and a load beam and wherein said first component receptacle includes a base
3 plate seat and a load beam seat.

1 14. The tray of claim 13 wherein said load beam seat includes a vacuum through
2 hole in fluid communication with said vacuum chamber of said base when said tray
3 is sealingly engaged therewith.

1 15. The tray of claim 12 wherein said tray includes a sub-tray, said sub-tray being
2 interposed between said base vacuum chamber and said tray and in fluid
3 communication with said base vacuum chamber, wherein said sub-tray includes a

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4 sub-tray load beam seat, said sub-tray load beam seat including a vacuum through
5 hole in fluid communication with said vacuum chamber.

6 16. The processing assembly of claim 9 wherein first and second component
7 receptacles include a common vacuum through hole extending through said tray into
8 fluid communication with said vacuum chamber of said base when said tray is
9 sealingly engaged therewith.

1 17. The processing assembly of claim 9 wherein said tray includes a sub-tray, said
2 sub-tray being interposed between said base vacuum chamber and said tray and in
3 fluid communication with said base vacuum chamber, wherein said sub-tray includes
4 a sub-tray component seat, said sub-tray component seat including a vacuum through
5 hole in fluid communication with said vacuum chamber.

1 18. The processing assembly of claim 8 wherein said assembly includes at least
2 a second vacuum chamber and a second component tray, said second component tray
3 being in fluid communication with said vacuum chamber and wherein said second
4 component tray is useful for holding components during a process performed on the
5 components, said tray comprising first and second sides, wherein:

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6 said first side includes at least one first component receptacle for engaging
7 said component; and

8 said second side includes at least one component engaging member;
9 wherein said first component receptacle and said component engaging member are
10 aligned such that when multiples of said second tray are stacked upon each other said
11 component engaging member and said receptacle will cooperate to restrain the
12 motion of the component relative to said second tray.

1 19. The processing assembly of claim 18 wherein the components held by the
2 first and second trays are identical.

1 20. The processing assembly of claim 18 wherein the components held by the
2 first and second trays are different.

1 21. The processing assembly of claim 20 wherein the components held by the
2 first tray are suspensions used in a hard disk drive.

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1 22. The processing assembly of claim 20 wherein the components held by the
2 first tray are suspensions used in a hard disk drive and the components held by the
3 second tray are flex circuits.

1 23. The processing assembly of claim 22 wherein the suspension has first and
2 second engagement surfaces and said first component receptacle engages said the
3 first suspension engagement surface and wherein said component engaging member
4 is a second component receptacle for engaging the second suspension engagement
5 surface.

1 24. The processing assembly of claim 23 wherein the suspension includes a base
2 plate and a load beam and wherein said first component receptacle includes a base
3 plate seat and a load beam seat.

1 25. The tray of claim 24 wherein said load beam seat includes a vacuum through
2 hole in fluid communication with said vacuum chamber of said base when said tray
3 is sealingly engaged therewith.

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- 1 26. The tray of claim 22 wherein said first tray includes a sub-tray, said sub-tray
- 2 being interposed between said base vacuum chamber and said tray and in fluid
- 3 communication with said base vacuum chamber, wherein said sub-tray includes a
- 4 sub-tray load beam seat, said sub-tray load beam seat including a vacuum through
- 5 hole in fluid communication with said vacuum chamber.